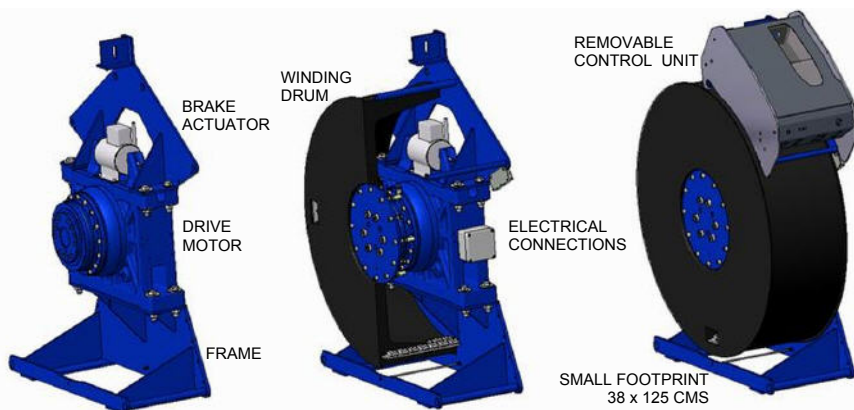


This was the background to our development of SynchroDisk. As a very small company, we thought, "What should we do with all that information?" People sometimes asked us, "Why did you make a big drum?" And I must be honest with you; the basic reason why we made a big drum winch is because it was different! However, the spin-off from this was quite interesting. We started really designing the winch from the motor up. The SynchroDisk concept is that of a heavy synchronous motor and a large drum around it, and on top, a box with the electronics that is detachable. That was the original concept.

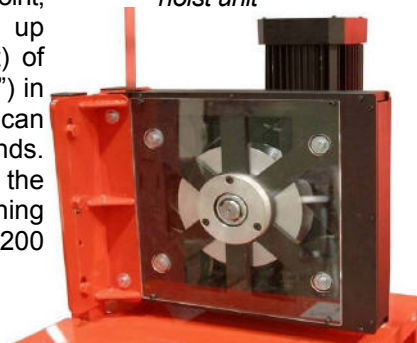


The SynchroDisk Hoist

**A montage of short extracts from the descriptions of four new systems from Trekwerk, Waagner-Biro, Stage Technologies and Hall Stage (ASM).**

Just running through details of the steel bands and their strengths, and the reasons why we like them so much. One is that they are phenomenally strong; the 0.4 mm thick band has a breaking strain of 2,650 kg (5,840 lbs). The bands themselves are guaranteed on installation for ten years. I am told by ASM that the shelf life of the steel itself is over 1,000 years. Steel band does not stretch at any point, until it breaks. Steel bands don't take up much space; 30 metres (nearly 100 ft) of travel can be put on a drum 24 cm (9.5") in diameter, which is really tiny. And we can get quite a high speed out of steel bands. There is an installation in Germany, the Thalia Theater in Hamburg, which is running at 1.8 m/sec (6 ft/sec) with 1,000 kg (2,200 lbs) load.

Spider steel-band hoist unit



The "Fly" product is a point hoist which is only a rectangular box with dimensions of approximately 800 x 300 x 1200 mm (32" x 12" x 48" ) high. To achieve the 450 kg payload, and the 1.2 m/sec lifting speed, we came up with the three versions. The power required is 4 kW for all the units. The travel is up to 28 metres (92 ft) which should be enough for most theatres, and the rope diameter is 6.5 mm (1/4"). The self weight is approximately 160 kg (350 lbs). And the hoist is quite silent in operation; the noise is lower than 55 dB(A) at a distance of 1 metre. We also tested it to fly at higher speeds than 1.2 m/sec (4 ft/sec), because a three-phase motor can be driven above synchronous speed while it has a load on it.

The standard 'Fly' hoist unit



I want to talk to you just a little bit about Beamhoist, which is the first product that we have launched to address this area of the market. First, it had to be simple to install. One of the major costs of a power flying system is installation. So if the equipment is simple to install, this will minimise the overall cost. It also had to have no special components determined by the number of lines used; that is, we didn't want to be making four-, five- and six-line header pulleys, and so on. We wanted standard

components. We also wanted to meet British Standard 7905 and other European legislation. It also had to be practicable to install some units one year, and then add bars, year on year, possibly utilising theatre production budgets as a way to do that. And it also had to be at a low enough price to open new markets, but without compromising safety or our own standards. In order to keep the cost to a minimum, the Beamhoist comprises only four major components.

Parts of a Beamhoist

